

U.S. Serial No. 08/860,007

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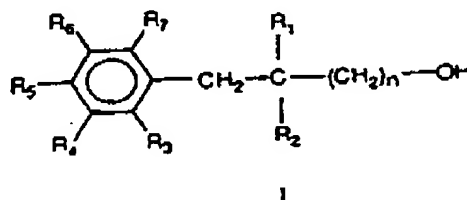
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Claims 1-7 (canceled)

8. (previously presented) Composition according to claim 14 which contains
- (a) 0.01 to 10% by wt. of a compound of formula I, and
  - (b) 0.1 to 90% by wt. of a compound selected from C<sub>1</sub>-C<sub>6</sub> alkyl alcohols, unsubstituted or substituted with a C<sub>6</sub>-C<sub>12</sub> aryl, aralkyl or aryloxy group, anionic cationic, amphoteric or nonionic surfactants, dimethylformamide, betaines and glycerine.

Claims 9-12 (canceled)

13. (previously presented) A compound according to formula I,



wherein R<sub>1</sub>, R<sub>3</sub>, R<sub>5</sub>, R<sub>6</sub>, and R<sub>7</sub> are hydrogen; R<sub>2</sub> is an ethyl group; R<sub>4</sub> is chlorine; and n is 1 or 2.

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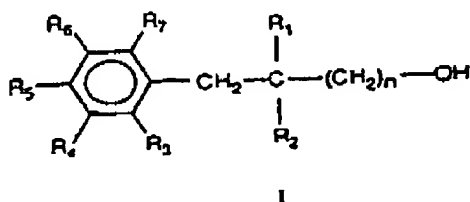
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14. (previously presented) A disinfectant, antiseptic, antimycotic, deodorant or preservative comprising:

a compound selected from alcohols, surfactants and solvents; and

at least one compound according to formula I:



wherein,

R<sub>1</sub> is hydrogen or is selected from C<sub>1</sub>-C<sub>8</sub> alkyl, uninterrupted or interrupted by oxygen and/or sulphur atoms, C<sub>2</sub>-C<sub>8</sub> alkenyl and C<sub>3</sub>-C<sub>8</sub> alkynyl;

R<sub>2</sub> is selected from C<sub>1</sub>-C<sub>8</sub> alkyl, uninterrupted or interrupted by oxygen and/or sulphur atoms, C<sub>2</sub>-C<sub>8</sub> alkenyl and C<sub>3</sub>-C<sub>8</sub> alkynyl; and

each of R<sub>3</sub> to R<sub>7</sub> independently, is hydrogen, halogen, nitrile or thiocyanate, or selected from C<sub>1</sub>-C<sub>8</sub> alkyl, uninterrupted or interrupted by oxygen and/or sulphur atoms, C<sub>2</sub>-C<sub>8</sub> alkenyl and C<sub>3</sub>-C<sub>8</sub> alkynyl, optionally attached to the aromatic ring by -S- or -O-, and n is 1 or 2,

with the proviso, that

- i) when R<sub>1</sub> and all groups R<sub>3</sub> through R<sub>7</sub> are hydrogen, then

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$n = 2$ ;

ii) when  $R_1$  and  $R_2$  are  $C_1$ - $C_6$  alkyl and

a) all groups  $R_3$  to  $R_7$  are hydrogen, or

b)  $R_5$  is methyl, methoxy or chloride, and all other groups  $R_3$ ,

$R_4$ ,  $R_6$  and  $R_7$  are hydrogen,

then  $n = 2$ ;

iii) when  $R_1$ ,  $R_2$  and  $R_4$  are methyl and all groups  $R_3$  and  $R_5$  through  $R_7$  are hydrogen, then  $n = 2$ ;

iv) when  $R_1$  and all groups  $R_3$ ,  $R_4$ ,  $R_6$  and  $R_7$  are hydrogen and  $R_5$  is methyl, isopropyl, tert-butyl, or methoxy, then  $n = 2$ ;

v) when  $R_1$ ,  $R_3$ ,  $R_6$  and  $R_7$  are hydrogen,  $R_2$  is methyl, and  $R_4$  and/or  $R_5$  are hydrogen or  $C_1$ - $C_6$  alkyl, then  $n = 2$ ;

vi) when  $R_1$  and  $R_4$  through  $R_7$  are hydrogen,  $R_2$  is methyl or ethyl, and  $R_3$  is methyl or methoxy, then  $n = 2$ ;

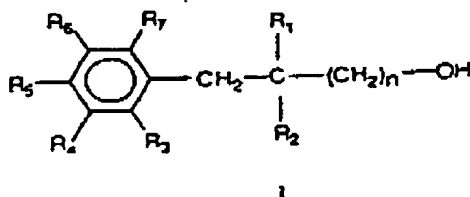
vii) when  $R_1$ ,  $R_3$ ,  $R_5$  and  $R_7$  are hydrogen,  $R_2$  is methyl,  $R_4$  and  $R_6$  are methyl or  $R_4$  is hydrogen and  $R_6$  is methyl, then  $n = 2$ ; and

viii) when  $R_1$  is hydrogen,  $R_2$  is butyl,  $R_3$  and  $R_5$  are chloride, and all other groups  $R_4$ ,  $R_6$  and  $R_7$  are hydrogen, then  $n = 2$ .

Claim 15 (canceled)

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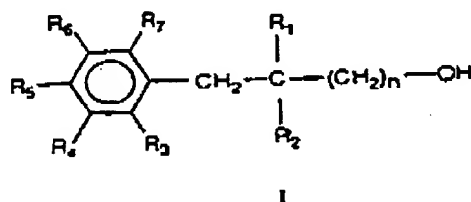
16. (previously presented) A composition according to claim 14, wherein said compound according to formula I is present in an amount of about 0.01 to about 10% by weight.
17. (previously presented) A composition according to claim 14, wherein said compound according to formula I is present in an amount of about 0.05 to about 8% by weight.
18. (previously presented) A composition according to claim 14, wherein said compound according to formula I is present in an amount of about 0.1 to about 5% by weight.
19. (withdrawn) A compound according to the formula I



wherein  $R_3$ ,  $R_4$ ,  $R_6$  and  $R_7$  are all hydrogen,  $R_5$  is methyl,  $R_2$  is ethyl,  $R_1$  is hydrogen, and  $n = 1$ .

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20. (withdrawn) Process for the production of a compound of formula I:



wherein,  $R_3$ ,  $R_4$ ,  $R_6$  and  $R_7$  are all hydrogen,  $R_5$  is methyl,  $R_2$  is ethyl,  $R_1$  is hydrogen, and  $n = 1$

said process comprising the steps of:

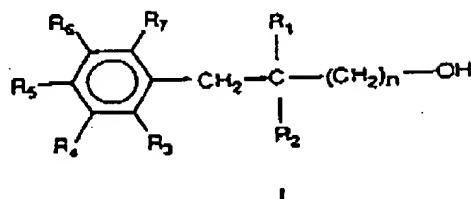
- a) monoalkylating a malonic acid dialkyl ester to introduce the group  $R_2$ ;
- b) dialkylating the monoalkylated malonic acid alkyl ester with a benzyl halide optionally substituted at the aromatic ring to introduce the groups  $R_3$  through  $R_7$  which are other than hydrogen;
- c) saponifying and decarboxylating the dialkylated malonic acid dialkyl ester to form a corresponding 3-aryl-substituted propionic acid, and
- d) reducing the 3-aryl-substituted propionic acid to form a desired alcohol of formula I.

21. (previously presented) A shampoo or shower gel containing a preservative comprising:

- a compound selected from alcohols, surfactants and solvents;
- a re-fatting agent; and

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a compound according to formula I:



wherein,

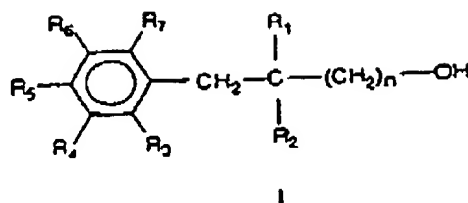
- R<sub>1</sub> is hydrogen or is selected from C<sub>1</sub>-C<sub>8</sub> alkyl, uninterrupted or interrupted by oxygen and/or sulphur atoms, C<sub>2</sub>-C<sub>8</sub> alkenyl and C<sub>3</sub>-C<sub>8</sub> alkynyl;
- R<sub>2</sub> is selected from C<sub>1</sub>-C<sub>8</sub> alkyl, uninterrupted or interrupted by oxygen and/or sulphur atoms, C<sub>2</sub>-C<sub>8</sub> alkenyl and C<sub>3</sub>-C<sub>8</sub> alkynyl; and
- each of R<sub>3</sub> to R<sub>7</sub> independently, is hydrogen, halogen, nitrile or thiocyanate, or selected from C<sub>1</sub>-C<sub>8</sub> alkyl, uninterrupted or interrupted by oxygen and/or sulphur atoms, C<sub>2</sub>-C<sub>8</sub> alkenyl and C<sub>3</sub>-C<sub>8</sub> alkynyl, optionally attached to the aromatic ring by -S- or -O-, and n is 1 or 2, with the proviso that when R<sub>1</sub> and all groups R<sub>3</sub>, R<sub>4</sub>, R<sub>6</sub> and R<sub>7</sub> are hydrogen and R<sub>5</sub> is methyl, isopropyl, tert-butyl, or methoxy, then n = 2.

22. (previously presented) A method of disinfecting a surface comprising the step of applying a disinfectant to said surface, said disinfectant comprising:
- a compound selected from alcohols, surfactants and solvents; and
  - a compound according to formula I:

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wherein,

$R_1$  is hydrogen or is selected from  $C_1$ - $C_8$  alkyl, uninterrupted or interrupted by oxygen and/or sulphur atoms,  $C_2$ - $C_8$  alkenyl and  $C_3$ - $C_8$  alkynyl;

$R_2$  is selected from  $C_1$ - $C_8$  alkyl, uninterrupted or interrupted by oxygen and/or sulphur atoms,  $C_2$ - $C_8$  alkenyl and  $C_3$ - $C_8$  alkynyl; and

each of  $R_3$  to  $R_7$  independently, is hydrogen, halogen, nitrile or thiocyanate, or selected from  $C_1$ - $C_8$  alkyl, uninterrupted or interrupted by oxygen and/or sulphur atoms,  $C_2$ - $C_8$  alkenyl and  $C_3$ - $C_8$  alkynyl, optionally attached to the aromatic ring by -S- or -O-, and  $n$  is 1 or 2, with the proviso that when  $R_1$  and all groups  $R_3$ ,  $R_4$ ,  $R_6$  and  $R_7$  are hydrogen and  $R_5$  is methyl, isopropyl, tert-butyl, or methoxy, then  $n = 2$ .

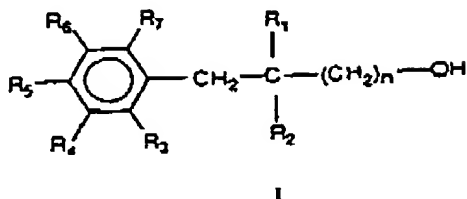
23. (previously presented) A method according to claim 22, wherein said surface is skin, a mucous membrane, or a surgical glove.

24. (previously presented) A method of deodorizing a surface comprising the step of applying a disinfectant to said surface, said deodorant comprising:

a compound selected from alcohols, surfactants and solvents; and

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a compound according to formula I:



wherein,

- $R_1$  is hydrogen or is selected from  $C_1$ - $C_8$  alkyl, uninterrupted or interrupted by oxygen and/or sulphur atoms,  $C_2$ - $C_8$  alkenyl and  $C_3$ - $C_8$  alkynyl;
- $R_2$  is selected from  $C_1$ - $C_8$  alkyl, uninterrupted or interrupted by oxygen and/or sulphur atoms,  $C_2$ - $C_8$  alkenyl and  $C_3$ - $C_8$  alkynyl; and
- each of  $R_3$  to  $R_7$  independently, is hydrogen, halogen, nitrile or thiocyanate, or selected from  $C_1$ - $C_8$  alkyl, uninterrupted or interrupted by oxygen and/or sulphur atoms,  $C_2$ - $C_8$  alkenyl and  $C_3$ - $C_8$  alkynyl, optionally attached to the aromatic ring by -S- or -O-, and  $n$  is 1 or 2, with the proviso that when  $R_1$  and all groups  $R_3$ ,  $R_4$ ,  $R_6$  and  $R_7$  are hydrogen and  $R_5$  is methyl, isopropyl, tert-butyl, or methoxy, then  $n = 2$ .

25. (previously presented) A method according to claim 24, wherein said surface is skin.

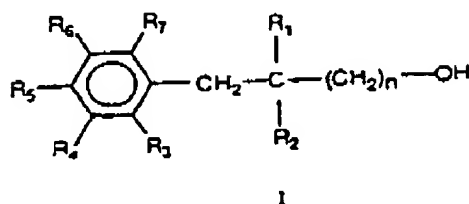


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26. (previously presented) Process for the production of a compound of formula I:



wherein,

R<sub>1</sub> is hydrogen;

R<sub>2</sub> is selected from C<sub>1</sub>-C<sub>8</sub> alkyl, uninterrupted or interrupted by oxygen and/or sulphur atoms, C<sub>2</sub>-C<sub>8</sub> alkenyl and C<sub>3</sub>-C<sub>8</sub> alkynyl; and

each of R<sub>3</sub> to R<sub>7</sub> independently, is hydrogen, halogen, nitrile or thiocyanate, or selected from C<sub>1</sub>-C<sub>8</sub> alkyl, uninterrupted or interrupted by oxygen and/or sulphur atoms, C<sub>2</sub>-C<sub>8</sub> alkenyl and C<sub>3</sub>-C<sub>8</sub> alkynyl, optionally attached to the aromatic ring by -S- or -O-, and n is 1;

said process comprising the steps of:

- a) monoalkylating a malonic acid dialkyl ester to introduce the group R<sub>2</sub>;
- b) dialkylating the monoalkylated malonic acid alkyl ester with a benzyl halide optionally substituted at the aromatic ring to introduce the groups R<sub>3</sub> through R<sub>7</sub> which are other than hydrogen;
- c) saponifying and decarboxylating the dialkylated malonic acid dialkyl ester to form a corresponding 3-aryl-substituted propionic acid, and

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- d) reducing the 3-aryl-substituted propionic acid to form a desired alcohol of formula I.

Claim 27 (canceled)

28. (withdrawn) A disinfectant, antiseptic, antimycotic, deodorant or preservative according to claim 27, wherein  $R_3$  to  $R_7$  are hydrogen,  $R_1$  is hydrogen,  $R_2$  is hydrogen and  $n$  is 1.
29. (withdrawn) A disinfectant, antiseptic, antimycotic, deodorant or preservative according to claim 27, wherein  $R_3$  to  $R_7$  are hydrogen,  $R_1$  is hydrogen,  $R_2$  is methyl, and  $n$  is 1.
30. (withdrawn) A disinfectant, antiseptic, antimycotic, deodorant or preservative according to claim 27, wherein  $R_3$  and  $R_5$  to  $R_7$  are hydrogen,  $R_4$  is methyl,  $R_1$  is hydrogen,  $R_2$  is methyl, and  $n$  is 1.
31. (withdrawn) A disinfectant, antiseptic, antimycotic, deodorant or preservative according to claim 27, wherein  $R_3$  to  $R_7$  are hydrogen,  $R_1$  is hydrogen,  $R_2$  is ethyl, and  $n$  is 1.

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32. (withdrawn) A disinfectant, antiseptic, antimycotic, deodorant or preservative according to claim 27, wherein  $R_3$  and  $R_5$  to  $R_7$  are hydrogen,  $R_4$  is methyl,  $R_1$  is hydrogen,  $R_2$  is ethyl, and  $n$  is 1.
33. (previously presented) A disinfectant, antiseptic, antimycotic, deodorant or preservative according to claim 14, wherein  $R_3$  and  $R_5$  to  $R_7$  are hydrogen,  $R_4$  is chlorine,  $R_1$  is hydrogen,  $R_2$  is ethyl and  $n$  is 1.
34. (previously presented) A disinfectant, antiseptic, antimycotic, deodorant or preservative according to claim 14, wherein  $R_4$  to  $R_7$  are hydrogen,  $R_3$  is chlorine,  $R_1$  is hydrogen,  $R_2$  is ethyl and  $n$  is 1.
35. (previously presented) A disinfectant, antiseptic, antimycotic, deodorant or preservative according to claim 14, wherein  $R_3$ ,  $R_4$ ,  $R_6$  and  $R_7$  are hydrogen,  $R_5$  is chlorine,  $R_1$  is hydrogen,  $R_2$  is ethyl and  $n$  is 1.
36. (withdrawn) A disinfectant, antiseptic, antimycotic, deodorant or preservative according to claim 27, wherein are hydrogen,  $R_4$  and  $R_5$  are chlorine,  $R_1$  is hydrogen,  $R_2$  is ethyl and  $n$  is 1.

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37. (withdrawn) A disinfectant, antiseptic, antimycotic, deodorant or preservative according to claim 27, wherein  $R_4$  to  $R_7$  are hydrogen,  $R_3$  is methyl,  $R_1$  is hydrogen,  $R_2$  is ethyl and  $n$  is 1.
38. (withdrawn) A disinfectant, antiseptic, antimycotic, deodorant or preservative according to claim 27, wherein  $R_3$ ,  $R_6$  and  $R_7$  are hydrogen,  $R_4$  and  $R_5$  are methyl,  $R_1$  is hydrogen,  $R_2$  is ethyl and  $n$  is 1.
39. (withdrawn) A disinfectant, antiseptic, antimycotic, deodorant or preservative according to claim 27, wherein  $R_3$  and  $R_5$  to  $R_7$  are hydrogen,  $R_4$  is methoxy,  $R_1$  is hydrogen,  $R_2$  is ethyl and  $n$  is 1.
40. (withdrawn) A disinfectant, antiseptic, antimycotic, deodorant or preservative according to claim 27, wherein  $R_3$ ,  $R_6$  and  $R_7$  are hydrogen,  $R_4$  and  $R_5$  are methoxy,  $R_1$  is hydrogen,  $R_2$  is ethyl and  $n$  is 1.
41. (withdrawn) A disinfectant, antiseptic, antimycotic, deodorant or preservative according to claim 27, wherein  $R_3$  to  $R_7$  are hydrogen,  $R_1$  is hydrogen,  $R_2$  is butylene, and  $n$  is 1.

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42. (withdrawn) A disinfectant, antiseptic, antimycotic, deodorant or preservative according to claim 27, wherein  $R_3$  to  $R_7$  are hydrogen,  $R_1$  is hydrogen,  $R_2$  is pentyl and  $n$  is 1.
43. (withdrawn) A disinfectant, antiseptic, antimycotic, deodorant or preservative according to claim 14, wherein  $R_1$  is  $C_2H_5$ ,  $R_2$  through  $R_7$  are H, and  $n$  is 1.
44. (withdrawn) A shampoo or shower gel containing a preservative according to claim 21, wherein  $R_1$  is  $C_2H_5$ ,  $R_2$  through  $R_7$  are H, and  $n$  is 1.
45. (withdrawn) A method according to claim 22, wherein  $R_1$  is  $C_2H_5$ ,  $R_2$  through  $R_7$  are H, and  $n$  is 1.
46. (withdrawn) A method according to claim 24, wherein  $R_1$  is  $C_2H_5$ ,  $R_2$  through  $R_7$  are H, and  $n$  is 1.
47. (withdrawn) A method according to claim 26, wherein  $R_1$  is  $C_2H_5$ ,  $R_2$  through  $R_7$  are H, and  $n$  is 1.
48. (new) A disinfectant, antiseptic, antimycotic, deodorant or preservative according to claim 14, wherein
- $R_1$  is selected from  $C_1$ - $C_8$  alkyl, uninterrupted or interrupted by oxygen and/or sulphur atoms,  $C_2$ - $C_8$  alkenyl and  $C_3$ - $C_8$  alkynyl;

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$R_2$  is selected from  $C_1$ - $C_8$  alkyl, uninterrupted or interrupted by oxygen and/or sulphur atoms,  $C_2$ - $C_8$  alkenyl and  $C_3$ - $C_8$  alkynyl; and

each of  $R_3$  to  $R_7$  independently, is hydrogen, halogen, nitrile or thiocyanate, or selected from  $C_1$ - $C_8$  alkyl, uninterrupted or interrupted by oxygen and/or sulphur atoms,  $C_2$ - $C_8$  alkenyl and  $C_3$ - $C_8$  alkynyl, optionally attached to the aromatic ring by -S- or -O-, and  $n$  is 1 or 2,

with the proviso, that

i) when  $R_1$  and all groups  $R_3$  through  $R_7$  are hydrogen, then

$n = 2$ ;

ii) when  $R_1$  and  $R_2$  are  $C_1$ - $C_6$  alkyl and

a) all groups  $R_3$  to  $R_7$  are hydrogen, or

b)  $R_5$  is methyl, methoxy or chloride, and all other groups  $R_3$ ,

$R_4$ ,  $R_6$  and  $R_7$  are hydrogen,

then  $n = 2$ ;

iii) when  $R_1$ ,  $R_2$  and  $R_4$  are methyl and all groups  $R_3$  and  $R_5$  through  $R_7$  are hydrogen, then  $n = 2$ ;

iv) when  $R_1$  and all groups  $R_3$ ,  $R_4$ ,  $R_6$  and  $R_7$  are hydrogen and  $R_5$  is methyl, isopropyl, tert-butyl, or methoxy, then  $n = 2$ ;

v) when  $R_1$ ,  $R_3$ ,  $R_6$  and  $R_7$  are hydrogen,  $R_2$  is methyl, and  $R_4$  and/or  $R_5$  are hydrogen or  $C_1$ - $C_6$  alkyl, then  $n = 2$ ;

vi) when  $R_1$  and  $R_4$  through  $R_7$  are hydrogen,  $R_2$  is methyl or ethyl, and  $R_3$  is methyl or methoxy, then  $n = 2$ ;

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vii) when  $R_1$ ,  $R_3$ ,  $R_5$  and  $R_7$  are hydrogen,  $R_2$  is methyl,  $R_4$  and  $R_6$  are methyl

or  $R_4$  is hydrogen and  $R_6$  is methyl, then  $n = 2$ ; and

viii) when  $R_1$  is hydrogen,  $R_2$  is butyl,  $R_3$  and  $R_5$  are chloride, and all other groups

$R_4$ ,  $R_6$  and  $R_7$  are hydrogen, then  $n = 2$ .

49. (New) A composition according to claim 21, comprising 5 to 25% by weight of surfactants.